



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,605	06/28/2001	Dave Langridge	0584-1043	5113

23644 7590 03/10/2005

BARNES & THORNBURG  
P.O. BOX 2786  
CHICAGO, IL 60690-2786

EXAMINER

LIN, KELVIN Y

ART UNIT	PAPER NUMBER
----------	--------------

2142

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/894,605

Applicant(s)

LANGRIDGE ET AL.

Examiner

Kelvin Lin

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## Detailed Action

### *Claim Rejections - 35 USC § 102*

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-16 are rejected under 35 U.S.C 102(e) as being anticipated by Hermann (US Patent 6606667).
2. Regarding claim 1, Herman teaches a communication network comprising:
  - (a) a plurality of switching nodes (Hermann, col. 3, l. 32),
  - (b) a plurality of network spans each comprising a working span and a protection span and arranged to interconnect the switching nodes in a ring configuration (Hermann, col. 1, l. 55)
  - (c)
    - a network controller (ADM) arranged to control switching of data in the network between the working and protection spans, the network being arranged to carry working data on the working spans and a portion of working data on the protection spans, the portion carried on the protection span having a bandwidth less than the maximum bandwidth of the protection spans, (Hermann, col. 1, l. 59-60),

- and the network controller being arranged in the event of a failure in a working span, to cause the switches to perform a span switch by switching a portion of the working data bandwidth being carried on the working span to the unused bandwidth on the protection span for the span having the working span failure and to perform a ring switch by switching the remainder of the working data bandwidth carried on the working span to the unused bandwidth on the protection spans of the other spans in the ring (Hermann, col. 4, l.53-67, col.5, l.1-67, and col.6, l.1-67),
  - the network controller being further arranged in the event of a failure in a protection span to cause the switches to perform a ring switch to switch the portion of the bandwidth of the working data to the unused bandwidth on the protection spans of the other spans in the ring (Hermann, col. 8, l.53).
3. Regarding claim 2, Hermann further discloses a network according to claim 1, wherein the network controller (ADM) is integral with a least one of the switching nodes (Hermann, col. 1, l. 58-59).
  4. Regarding claim 3, Hermann further discloses a network according to claim 1, wherein the spans are carried over optical fibers (Hermann, col. 7, l. 52-53).
  5. Regarding claim 4, Hermann further discloses a network according to claim 1, wherein the data is transmitted over the network using a protocol selected from a group containing SONET and SDH (Hermann, col. 1, l.28).

Art Unit: 2142

6. Regarding claim 5, Hermann further discloses a network according to claim 1, wherein the bandwidth on the protection spans not used for working data before a failure in a working span is at least half the maximum bandwidth of the protection spans. (Hermann, col. 8, l. 8).
7. Regarding claim 6, Hermann further discloses a network according to claim 1, wherein the bandwidth on the protection spans not used for working data before a failure in a protection span is at least half the maximum bandwidth of the protection spans (Hermann, col. 8, l. 8).
8. Regarding claim 7-10 have similar limitation as claim 1.C, 2, 5-6. Therefore, claim 7-9 are rejected under Hermann for the same reason set forth in the rejection of claim 1.C, 2, 5-6.
9. Regarding claim 11-13 have similar limitation as claim 1.C, 5-6. Therefore, Claim 11-13 are rejected under Hermann for the same reason set forth in the rejection of claim 11-13.
10. Regarding claim 14, Hermann further discloses a method of transmitting data over a communications network, the network having a plurality of switching nodes interconnected in a ring configuration, and each network span having a protection span and a working span, the method comprising:
  - a. Transmitting working data over each working span at a bandwidth  
Up to the maximum bandwidth of the working span – all of the  
bandwidth on the working line will be used to carry working traffic  
(Hermann, col. 5, l. 26-29),

- b. Transmitting working data over each protection span at a portional bandwidth which is less than the maximum bandwidth of the protection span (Hermann, col. 6, l. 17-25),
  - c. In the event of a failure in a working span, performing a span switch by switching a portion of the working data bandwidth to the unused bandwidth on the protection span for the span having the working span failure and performing a ring switch by switching the remainder of the working data bandwidth to the unused bandwidth on the protection spans of the other spans in the ring (Hermann, col. 4, l.54-55).
  - d. In the event of a failure in a protection span, performing a ring switch by switchin the portional bandwidth of the working data to the unused bandwidth on the protection spans of the other span in the ring (Hermann, col. 4, l. 36-39).
11. Regarding claim 15, Hermann further discloses a method according to claim 14, wherein the bandwidth on the protection spans not used for working data before a failure in a working span is at least half the maximum bandwidth of the protection spans (Hermann, col. 6, l.33-34).
12. Regarding claim 16, Hermann further discloses a method according to claim 14, wherein the bandwidth on the protection spans not used for working data before a failure in a protection span is at least half the maximum of the protection spans (Hermann, col. 8, l. 8).

***Response to Remarks***

1. The Application's arguments with respect to claims 1-16 have been considered but are not persuasive. Examiner appreciates detail description of prior art.
2. Regarding claim 11, applicant argues that "arranged to permit the network to carry working data on the working spans and a portion of working data on the protection spans".
3. Hermann clearly discloses that the balanced network has high working/protection bandwidth ratio, it can suffer a single node failure, or multiple line failure on two separate arms, and it can accommodate maintenance on all spans of two separate arms. In addition, the "ratio" parameters in the equation shown on (Hermann col.4, l. 53-67, col.5, l.1-67, and col.6, l.1-67) are an optimized design for the best result. So that, when the traffic on the working line is switched onto the protection line, and all of the bandwidth on the working line will be used to carry working traffic; with some of the BW ratio on the protection line will also be used to carry working traffic (Hermann, col.5, 23-30).
4. Regarding claim 14, applicant argues that "each network span having a protection span and a working span".

Hermann clearly discloses that the balanced network distributes the traffic onto the working line, or/and protection line. (Maloney, col.5, l.26-29).

5. Therefore, examiner contends Herman discloses that a plurality of network spans each comprising a working span and a protection span.

Application/Control Number: 09/894,605  
Art Unit: 2142

Page 7



***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MEPE 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this inal action is set to expire THREE MONTHS from the mailing date of this action. In the event a first replay is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTH from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Lin whose telephone number is 703-605-1726. The examiner can normally be reached on Flexible 4/9/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on 703-305-9705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2142

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kyl  
2/26 /2005

*Jack Angus*  
 BLOCK NUMBER  
 SUPERVISOR/TESTER EXAMINER